

PIPELINE SAFETY

DID YOU KNOW?

*One of the leading causes of pipeline failures is from someone damaging the pipeline when they're digging near it. We watch for unauthorized digging, but **we're also asking for your help.***



All states have established one-call notification centers and require by law that you call 48 to 72 hours before digging. Simply dial **811** to reach the one-call center in our area to ensure your safety. The one-call center will notify the City of Midland and owners of other buried utilities so they can mark their underground facilities in the area before digging begins. Once these facilities are marked, you'll "know what's below" and can dig safely.

For more information on digging and damage prevention, visit
www.missdig.net.

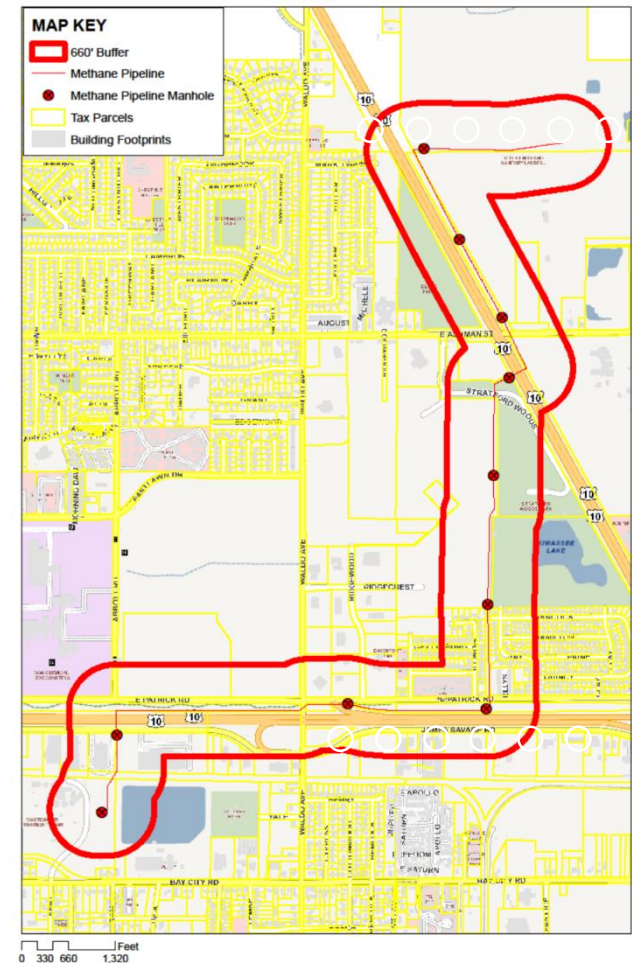


City of Midland
333 West Ellsworth Street
Midland, Michigan 48640

Phone (989) 837-3500
<http://www.midland-mi.org>

Pipeline Safety

What you need to know



This information is provided to those individuals living and/or working near the City of Midland Landfill Gas Pipeline. The brochure has been designed to provide you basic information regarding pipelines and how to recognize leaks and how to respond in the event of a pipeline emergency.

What the City of Midland Does If an Emergency Occurs

The City of Midland Department of Utilities facilities are designed to isolate the landfill gas pipeline in the event of an emergency. We have developed a comprehensive Emergency Response Plan to assure an effective response to pipeline emergencies. Our personnel are trained to work in cooperation with emergency responders to manage these events.

Pipeline Location and Markers



Pipeline markers like these are used to indicate the approximate location of the landfill gas pipeline and to provide contact information. Markers should never be removed or relocated by anyone other than a pipeline operator.

You can find out which pipelines are in your area by going to the National Pipeline Mapping System website at www.npms.phmsa.dot.gov. Pipeline maps and markers provide the general location of the pipeline, but are NOT an alternative to calling one-call before excavating. If you plan to do some digging, always call **811** before you dig.



Properties of Landfill Gas (LFG)

- ✓ LFG is generated during the natural process of bacterial decomposition of organic material contained in municipal solid waste (MSW) landfills.
- ✓ Composition by volume, LFG is about 50 percent methane and 50 percent carbon dioxide and water vapor. It also contains small amounts of nitrogen, oxygen, and hydrogen, less than 1 percent non-methane organic compounds (NMOCs), and trace amounts of inorganic compounds.
- ✓ Lighter than Air – 40 percent lighter than air.
- ✓ Hazardous Material – due to its flammability.
- ✓ Flammable – Approximately 5 -17 percent gas-to-air mix is the flammable range.
- ✓ Odor – while methane is odorless, landfill gas contains compounds that have strong, pungent odors (for example, hydrogen sulfide – the smell of rotten eggs).
- ✓ Combustion Products – No significant harmful compounds result from natural gas combustion. However, incomplete combustion may produce carbon monoxide.
- ✓ Ignition Temperature – The ignition temperature is nearly 1100 degrees Fahrenheit. Static electricity, pilot lights, matches, and sparks from telephones, electric motors and internal combustion engines can easily reach this temperature.
- ✓ Asphyxiant – Landfill gas can displace oxygen in an enclosed space, resulting in the potential for suffocation.
- ✓ Non-Toxic - Because of its high energy value and low environmental emissions when burned, it is increasingly a fuel of choice for generating electricity and fueling industry.

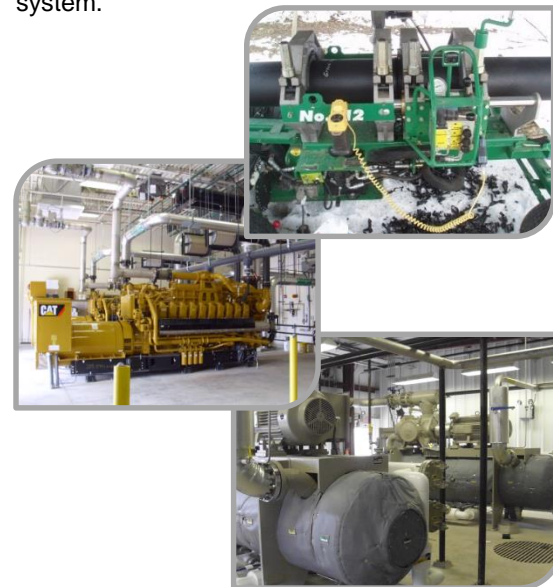


In fact, our landfill gas, is a renewable resource! That's an important distinction as we tackle the dual challenge of meeting increased energy demand while reducing our carbon footprint.

Midland Gas to Energy

The City of Midland operates about 3.4 miles of landfill gas trans-mission pipeline.

We monitor our pipeline in many ways, including round-the-clock electronic monitoring, regular ground surveillance, and during routine operation and maintenance. We work hard to maintain the integrity of our pipeline system and keep it safe from security threats. We stay in touch with industry and government organizations to monitor potential threats and study new technologies that will help keep our facilities as safe and secure as possible. Neighbors like you can help us to maintain a safe, secure and reliable gas to energy system.



Report unusual or suspicious activity near our pipeline facilities, and, in the unlikely event of an emergency, please call us immediately

Phone (989) 837-3500